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CLAIMS

1. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
5 and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein the  
direction along an optical axis of said optical fiber,, is  
the direction of a high elastic modulus in the resin  
material at a main portion along at least said optical axis  
10 of said optical fiber in said resin case member.

2. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein the  
15 direction along an optical axis of said optical fiber, is  
the direction of a low coefficient of thermal expansion in  
the resin material at a main portion along at least said  
optical axis of said optical fiber of said resin case  
member,.

20 3. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
and said optical fiber mounted thereon, a main flowing  
direction of the resin being substantially parallel with  
25 the optical axis of said optical fiber.

4. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein at a main  
5 portion along at least an optical axis of said optical  
fiber in said resin case member, the orientation of a  
molecular chain of the resin is substantially parallel with  
the optical axis of said optical fiber.

5. An optical module comprising an optical device,  
10 an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein said resin  
case member is formed of a thermoplastic resin, and the  
direction along an optical axis of said optical fiber, is  
15 the direction of a high elastic modulus in the resin  
material at a main portion along at least the optical axis  
of said optical fiber of said resin case member.

6. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
20 and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein said resin  
case member is formed of a thermoplastic resin, and the  
direction along an optical axis of said optical fiber is  
the direction of a low thermal expansion coefficient in the  
25 resin material of a main portion along at least the optical

axis of said optical fiber in said resin case member.

7. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
5 and said optical fiber mounted thereon, wherein said resin  
case is formed of a thermoplastic resin, and when the resin  
case is formed, the resin case is molded so that a main  
flowing direction of the resin is substantially parallel  
with an optical axis of said optical fiber.

10 8. An optical module comprising an optical device,  
an optical fiber optically coupled to said optical device,  
and a resin case member having at least said optical device  
and said optical fiber mounted thereon, wherein at a main  
portion along at least an optical axis of said optical  
15 fiber in said resin case member, an orientation of a  
molecular chain of the resin is substantially parallel with  
the optical axis of said optical fiber.

9. The optical module according to any one of  
claims 1 to 8, wherein said optical device and at least a  
20 portion of said optical fiber are encapsulated with a  
transparent resin.

10. An optical module comprising an optical device,  
and an optical fiber optically coupled to said optical  
device, wherein a main flowing direction of the resin is  
25 substantially parallel with an optical axis of said optical

fiber to mold the resin, and then said resin is solidified to package said optical device and at least a part of said optical fiber.

11. The optical module according to claim 10,  
5 wherein said resin comprises a thermosetting resin.

12. The optical module according to any of claims 10 and 11, wherein said optical device and the part of said optical fiber is encapsulated on a predetermined member with a transparent resin, a main flowing direction of the  
10 resin is substantially parallel with an optical axis of said optical fiber to mold the resin, and then said resin is solidified and packaged, including at least said predetermined member.

13. A method for manufacturing an optical module  
15 comprising an optical device and an optical fiber optically coupled to said optical device, comprising the steps of: making a main flowing direction of the resin substantially parallel with the optical axis of said optical fiber to mold the resin; and then solidifying said resin to package  
20 a part of said optical device and at least a portion of said optical fiber.

14. The method for manufacturing an optical module according to claim 13, wherein said optical device and the part of said optical fiber is coated on a predetermined  
25 member with a transparent resin, a main flowing direction

of the resin is substantially parallel with an optical axis of said optical fiber to mold the resin, and then said resin is solidified and packaged, including at least said predetermined member.

5           15. A method for manufacturing an optical module comprising the steps of: preparing at least an optical device, an optical fiber optically coupled to said optical device, a substrate having said optical device and said optical fiber mounted thereon, and a lead frame  
10 electrically connected to said optical device; and flowing a thermosetting resin generally parallelly with an optical axis of said optical fiber to effect transfer molding with inserting said substrate and said lead frame;.

          16. An optical communication apparatus comprising  
15 at least an optical module and an assembly substrate on which said optical module is mounted, said optical module having at least an optical device, an optical fiber optically coupled to said optical device, and a package encasing said optical device and at least a part of said  
20 optical fiber, said package being a package molded by flowing a resin substantially parallelly with the optical axis of said optical fiber.

          17. An optical communication apparatus comprising  
at least an optical module and an assembly substrate on  
25 which said optical module is mounted, said optical module

having at least an optical device, an optical fiber  
optically coupled to said optical device, and a package  
encasing therein said optical device and at least a part of  
said optical fiber, the direction of along an optical axis  
5 of said optical fiber being the direction of high elastic  
modulus in the resin material at a main portion along at  
least the optical axis of said optical fiber in said  
package.

18. An optical communication apparatus comprising  
10 at least an optical module and an assembly substrate on  
which said optical module is mounted, said optical module  
having at least an optical device, an optical fiber  
optically coupled to said optical device, and a package  
encasing therein said optical device and at least a part of  
15 said optical fiber, the direction of along an optical axis  
of said optical fiber being the direction of a low thermal  
expansion coefficient in the resin material at a main  
portion along at least the optical axis of at least said  
optical fiber in said package.

20 19. An optical communication apparatus comprising  
at least an optical module and an assembly substrate on  
which said optical module is mounted, said optical module  
having at least an optical device, an optical fiber  
optically coupled to said optical device, and a package  
25 encasing therein said optical device and at least a part of

said optical fiber, the direction of along the optical axis  
of said optical fiber being the direction of orientation of  
a molecular chain in the resin material at a main portion  
along at least said optical axis of at least said optical  
5 fiber in said package.